

## Community Service: Adapting Peer Review to the Patenting Process

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**Abstract:** Demands placed upon the United States Patent and Trademark Office have resulted in granting overly broad and non-meritorious patents. Recent developments in patent law, such as the Patent Reform Act of 2007 and the Supreme Court decision in *KSR International Co. v. Teleflex Inc.*, attempt to address problems inherent in the current patent system, yet none resolved possibly the most fundamental aspect of the overall patent dilemma: the patent examination process. Current examination techniques do not yield the most effective pool of relevant prior art. The goal is to reduce patent pendency time and increase the quality of patents issued. This can only be accomplished by streamlining the detection of relevant prior art. The Peer-to-Patent pilot solves this problem by inviting public participation into the patent examination process in order to directly address the information deficit.

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## I. INTRODUCTION

When examiners review a patent application, they compare the invention with publicly available information and decide whether the new invention is innovative enough to deserve a patent (and all the rights that come with it). Patent examiners at the United States Patent and Trademark Office ("PTO") are under extreme workload pressures and, consequently, some applications slip through the cracks. This has led to the granting of overly broad and non-meritorious patents. However, the problem is not one of ineptitude on the part of the examiners. Rather, it is generally a consequence of unfocused information, where examiners are either forced to sift through too much information to find something relevant or, conversely, are unable to find something relevant because there is not enough information to sift through. This is the impetus for Peer-to-Patent. By supplementing examiners' own searches with prior art submitted by the public, examiners are placed in a better position to make accurate decisions regarding the patentability of claimed inventions.

The PTO, the Federal Trade Commission, and the National Research Council have each conducted their own investigations into the perceived problems underlying the current patent system.<sup>1</sup> While adopting different approaches, all three of the investigations agree that something must be done to improve the quality of both patent examination and the information available to patent examiners. As part of the PTO's commitment to improving the patent system, it launched a year-long pilot on June 15, 2007 named "Peer-to-Patent: Community Patent Review" in collaboration with New York Law School. Peer-to-Patent is a program designed to directly address the information deficit. The program actively seeks out information that may not reside within the closed PTO search system. The goal is to bring transparency to an otherwise opaque process by getting the right information to those making crucial decisions.

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<sup>1</sup> See Lee A. Hollaar, *A New Technology Protection 7* (Sept. 17, 2007) (unpublished manuscript, on file with author), <http://digital-law-online.info/papers/lah/tech-protect.pdf>; U.S. PATENT AND TRADEMARK OFFICE, 21ST CENTURY STRATEGIC PLAN (February 3, 2003), available at <http://www.uspto.gov/web/offices/com/strat21/index.htm>; see FED. TRADE COMM'N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY (2003), <http://www.ftc.gov/os/2003/10/innovationrpt.pdf>; STEPHEN A. MERRILL ET AL., *A PATENT SYSTEM FOR THE 21ST CENTURY* 104 (Nat'l Academy of Sciences ed., 2004), available at <http://books.nap.edu/catalog/10976.html>.

## II. RECENT HISTORY

On April 18, 2007, the Patent Reform Act of 2007 (“PRA”)<sup>2</sup> was introduced to the 110th United States Congress. Less than two weeks later, on April 30,<sup>3</sup> the U.S. Supreme Court handed down a landmark, unanimous decision in *KSR International Co. v. Teleflex Inc.*<sup>4</sup> regarding the non-obviousness<sup>5</sup> element of patentability. The PRA consists of the most significant changes to patent law in over fifty years.<sup>6</sup> The decision in *KSR* ostensibly does away with a standard developed by the Court of Appeals for the Federal Circuit (“CAFC”) that has been used for nearly two decades of patent litigation<sup>7</sup> and has been relied upon by the PTO in the prosecution of over 2 million

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<sup>2</sup> Patent Reform Act of 2007, H.R. 1908, 110th Cong. (2007).

<sup>3</sup> To emphasize this point, the same day the Supreme Court decided *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746 (2007), which is also hailed as very significant decision, though it goes unmentioned in this article.

<sup>4</sup> *KSR Int’l Co., v. Teleflex Inc.*, 127 S. Ct. 1727 (2007).

<sup>5</sup> “Non-obviousness” is the term used in U.S. patent law to describe one of the three requirements that an invention must meet to qualify for patentability, codified in 35 U.S.C. § 103 (2006). One of the main requirements of patentability is that the invention being patented is not obvious, meaning that a “person having ordinary skill in the art” (“PHOSITA”) would not know how to solve the problem at which the invention is directed by using exactly the same mechanism. The factors a court will look at when determining obviousness and non-obviousness in the United States were outlined by the Supreme Court in *Graham v. John Deere Co.*, 383 U.S. 1 (1966) and are commonly referred to as the “Graham factors.” In *Graham*, the court held that obviousness should be determined by looking at (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and objective evidence of non-obviousness. In addition, the court outlined examples of factors that show “objective evidence of non-obviousness.” These factors are: (1) commercial success; (2) long-felt but unsolved needs; and (3) failure of others. See Wikipedia, Inventive Step and Non-Obviousness, [http://en.wikipedia.org/wiki/Inventive\\_step\\_and\\_non-obviousness](http://en.wikipedia.org/wiki/Inventive_step_and_non-obviousness) (last visited Mar. 27, 2008).

<sup>6</sup> S. COMM. ON THE JUDICIARY, 110TH CONG., THE PATENT REFORM ACT OF 2007 [REPORT TO ACCOMPANY S.1145] 1 (Comm. Print 2008), available at <http://www.ipso.org/AM/Template.cfm?Section=Home&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=17166>. “Congress has not enacted comprehensive patent law reform in more than 50 years. The last major revision of the patent laws was the Patent Act of 1952, P.L. 82-593.”

<sup>7</sup> See *South Corp. v. United States*, 690 F.2d 1368 (Fed. Cir. 1982) (en banc).

patents.<sup>8</sup> Both are significant departures from our traditional system of patenting and mark a new trend towards confronting problems presented by our patent system.

But these reform efforts, despite their far-reaching sweep, are unlikely to move forward with any alacrity. There are a number of reasons for this. From a philosophical perspective, the institution of patents is explicitly mandated by the U.S. Constitution,<sup>9</sup> making it part of the “supreme law of the land”<sup>10</sup>; the federal government has traditionally approached any changes to this system with trepidation. Further apprehension can be attributed to more practical factors. Consequences associated with economic tinkering, disagreement between industry and special interest groups regarding reform measures, and lack of public interest in the topic, are just a few of the obstacles standing in the way of a serious overhaul. Thus, while both the PRA and the KSR decision signal the possibility of major change for the current patent system, it will likely be incremental and deliberate.

Versions of the PRA moved through both the House and Senate Judiciary Committees relatively unscathed and the House version of the bill was passed on September 11, 2007.<sup>11</sup> But passage by the entire Congress is still far from certain. There has been no action on the Senate version of the PRA<sup>12</sup> and opponents of the Act remain skeptical.<sup>13</sup> Noted patent commentator Dennis Crouch suggested on

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<sup>8</sup> See U.S. PATENT AND TRADEMARK OFFICE, U.S. PATENT ACTIVITY CALENDAR YEARS 1790 TO PRESENT (Mar. 2007), available at [http://www.uspto.gov/web/offices/ac/ido/oeip/taf/h\\_counts.pdf](http://www.uspto.gov/web/offices/ac/ido/oeip/taf/h_counts.pdf).

<sup>9</sup> U.S. CONST. art. I, § 8, cl. 8 (“To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”).

<sup>10</sup> U.S. CONST. art. VI, cl. 2 (“This Constitution . . . shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.”).

<sup>11</sup> Patent Reform Act of 2007, H.R. 1908, 110th Cong. (2007).

<sup>12</sup> Patent Reform Act of 2007, S. 1145, 110th Cong. (2007).

<sup>13</sup> To name a few of those opposed to the PRA: Chief Judge Paul R. Michel of the United States Court of Appeals for the Federal Circuit has sent a letter of opposition to Senators Leahy and Hatch (sponsors of the PRA), as have several Republican members of the Judiciary Committee. See Letter from Paul R. Michel, Chief Judge, U.S. Ct. of App. for the Fed. Cir., to the Hon. Patrick Leahy, U.S. Senate (D-VT), and the Hon. Orrin G. Hatch (R-UT), U.S. Senate (May 3, 2007), available at <http://www.filewrapper.com/PDFs/Michelletter.pdf>; and see Letter from the Hon. Tom Coburn, U.S. Senate (R-OK), the Hon.

his blog, Patently-O, that, as a result of its “top secret development,” the PRA is “so one-sided that it is quite unlikely to move forward without a complete overhaul.”<sup>14</sup> After the bills moved through their respective Congressional Judiciary Committees, the Innovation Alliance<sup>15</sup> issued a statement expressing “[disappointment] with the lack of real progress made by the House Judiciary Committee on addressing key issues of concern,”<sup>16</sup> and another saying that “as passed by the Senate Judiciary Committee, the Patent Reform Act is still very problematic.”<sup>17</sup> While there are just as many who are convinced that the PRA (in some form) will be passed (and soon), the stark contrast between supporting and opposing sentiment illustrates the lack of consensus with regard to the legislative solution and

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Jeff Sessions, U.S. Senate (R-AL), the Hon. Charles Grassley, U.S. Senate (R-IA), the Hon. Jon Kyl, U.S. Senate (R-AZ), and the Hon. Sam Brownback, U.S. Senate (R-KS) to the Hon. Patrick Leahy, Chairman, Comm. on the Judiciary, U.S. Senate, and the Hon. Arlen Specter, Ranking Member, Comm. on the Judiciary, U.S. Senate (June 11, 2007), *available at* <http://www.filewrapper.com/PDFs/20070612Judiciarycommitteeletter.pdf>. With regard to industry opposition, the Innovation Alliance sent a letter of opposition to Senate Majority Leader Harry Reid that has been signed by over 480 organizations from all 50 states. Press Release, Innovation Alliance, *More Than 430 Organizations From All 50 States Speak Out Against Proposed Patent Reform Act* (Oct. 23, 2007) (on file with Innovation Alliance), *available at* <http://www.innovationalliance.net/media-center/news/more-430-organizations-all-50-states-speak-out-against-proposed-patent-reform-act>. For a full listing of all 430 organizations in opposition, see *List of Signatories Opposing Patent Reform*, [http://www.innovationalliance.net/files/Opposing%20Patent%20Reform%20Signatories%202-26-08\\_o.pdf](http://www.innovationalliance.net/files/Opposing%20Patent%20Reform%20Signatories%202-26-08_o.pdf) (last visited Mar. 27, 2008). Other notable parties opposed to the PRA include IEEE-USA, the AFL-CIO, and the Patent Office Professional Association. See *POPA Joins Unions in Opposition to Patent Reform Act*, <http://www.popa.org/html/issues/patentreform.htm> (last visited Mar. 27, 2008).

<sup>14</sup> See Posting of Dennis Crouch to Patently-O Patent Law Blog, [http://www.patentlyo.com/patent/2007/04/patent\\_reform\\_a\\_2.html](http://www.patentlyo.com/patent/2007/04/patent_reform_a_2.html) (April 22, 2007).

<sup>15</sup> The Innovation Alliance is a coalition of entrepreneurial companies and includes representatives from universities, venture capital, biotechnology, nanotechnology, and emerging tech-companies. See Innovation Alliance, <http://www.innovationalliance.net> (last visited Mar. 27, 2008).

<sup>16</sup> Press Release, Innovation Alliance, *House Judiciary Committee Leaves Bipartisan Concerns on Patent System Overhaul Unaddressed* (July 18, 2007), *available at* <http://www.innovationalliance.net/media-center/news/house-judiciary-committee-leaves-bipartisan-concerns-patent-system-overhaul-unaddr>.

<sup>17</sup> Press Release, Innovation Alliance, *Senate Judiciary Committee Reports Patent Reform Bill That Threatens American Innovation* (July 19, 2007), *available at* <http://www.innovationalliance.net/media-center/news/senate-judiciary-committee-reports-patent-reform-bill-threatens-american-innovation>.

suggests that real compromise and progress may be further off than previously anticipated by the parties involved.<sup>18</sup>

History also seems to teach against placing too many eggs in the PRA basket. Comparable omnibus patent reform legislation has been proposed each of the last two years,<sup>19</sup> neither of which has gone anywhere before dying out in Congress.

On the judicial side of patent reform, the decision handed down in *KSR International Co. v. Teleflex*,<sup>20</sup> though unanimous among the Supreme Court Justices, was far more restrained in its wording than many expected. During oral argument in November 2006, Justice Scalia referred to the CAFC's Teaching-Suggestion-Motivation test ("TSM test") for non-obviousness<sup>21</sup> as "gobbledygook" and "irrational."<sup>22</sup> But, in the actual opinion delivered five months later, Justice Kennedy, writing for the Court, was much less aggressive. The Court restated its support of the test for non-obviousness first embraced in *Graham v. John Deere Co.*,<sup>23</sup> but expressed greater

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<sup>18</sup> The statements from the Innovation Alliance and Crouch reflect the general patent community's sentiment in light of recent legislative action, but should not be treated as indicating that the PRA is actually dead. See Posting of Dennis Crouch to Patently-O Patent Law Blog, <http://www.patentlyo.com/patent/2007/08/congressional-p.html> (August 30, 2007). The truth is that we will not actually know until the PRA has been voted upon by the entire Congress. However, the statements of these commentators are included here because they accurately illustrate the extent to which the opposition opposes the PRA as-is.

<sup>19</sup> See Patent Reform Act of 2005, H.R. 2795, 109th Cong. (2005); see Patent Reform Act of 2006, S. 3818, 109th Cong. (2006).

<sup>20</sup> *KSR Int'l*, 127 S. Ct. 1727.

<sup>21</sup> Since the combination of previously known elements can be considered obvious and since almost all inventions are some combination of known elements, the TSM test requires a patent examiner (or accused infringer) to show that some suggestion or motivation exists to combine known elements to form a claimed invention. See Wikipedia.org, Inventive Step and Non-obviousness, *supra* note 5.

<sup>22</sup> See Transcript of Oral Argument at 41, *KSR Int'l*, 127 S. Ct. 1727.

<sup>23</sup> See *Graham*, 383 U.S. at 17. "Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented."

concern with the application of the TSM test than the test itself.<sup>24</sup> While the overall opinion was still somewhat pointed, this was a far cry from Chief Justice Roberts' criticism of the TSM test as "worse than meaningless."<sup>25</sup> It remains to be seen how the lower courts will come to apply the Supreme Court's holding in the long term, but the CAFC has since invalidated at least one patent that the district court upheld prior to the *KSR* decision, on the ground that the claimed invention was obvious without an explicit teaching by the prior art.<sup>26</sup>

While parties on all sides of the patent debate anticipate changes, there is a reluctance to rock the patent boat. And though the PRA and the *KSR* decision both provide hope that the patent community is moving in the right direction toward reform, it is clear that more intermediate measures need to be embraced as a means to that improved end.

### III. THE PATENT EXAMINATION PROCESS

The two high-profile events examined above seem to signify a renewed willingness by Congress and the Courts to tackle controversial, modern patent issues (or at least an inability to avoid them any longer). In either case, it has become evident that many of the problems inherent in our system of patents are beginning to be addressed. However, while both the PRA legislation and *KSR* decision attempt to reconcile perceived ills in the current law, neither resolve what is possibly the most fundamental aspect of the overall patent problem: the patent examination process.

The main concern is that demands placed upon the PTO have resulted in granting overly broad and non-meritorious patents. Today 5,500 U.S. patent examiners labor independently, under a backlog approaching 1 million applications, with no more than eighteen to

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<sup>24</sup> See *KSR Int'l*, 127 S. Ct. at 1741. "There is no necessary inconsistency between the idea underlying the TSM test and the Graham analysis. But when a court transforms the general principle into a rigid rule that limits the obviousness inquiry, as the Court of Appeals did here, it errs." *Id.*

<sup>25</sup> See Transcript of Oral Argument at 41, *KSR Int'l*, 127 S. Ct. 1727.

<sup>26</sup> See *Aventis Pharma Deutschland GmbH v. Lupin, Ltd.*, 499 F.3d 1293 (Fed. Cir. 2007) ("However, if it is known that some desirable property of a mixture derives in whole or in part from a particular one of its components, or, if the prior art would provide a person of ordinary skill in the art with reason to believe that this is so, the purified compound is *prima facie* obvious over the mixture even without an explicit teaching that the ingredient should be concentrated or purified.").

twenty hours to review each application.<sup>27</sup> The number of patent applications filed per year has grown steadily from 250,000 in 2000 to over 400,000 in 2006.<sup>28</sup> If no action is taken, the backlog is projected to reach 1.4 million applications by 2012.<sup>29</sup> These numbers are in stark contrast to the European Patent Office (“EPO”) whose 3,500 examiners received 208,000 patent applications in 2006 while working under a backlog one-third that of the PTO.<sup>30</sup> Though informative of the problem, these numbers are not conclusive. The third of the “Trilateral Offices,” the Japanese Patent Office (“JPO”), works under similar (if not greater) pressure than the PTO, receiving 400,000+ patent applications annually while maintaining a backlog of about 750,000. However, the JPO only employs 1,358 patent examiners, roughly one-third of the PTO.<sup>31</sup>

The problem at the PTO is likely a combination of understaffing and lack of information. The former is seemingly easy to rectify: hire more examiners. The PTO is doing exactly that. In 2006, the PTO hired 1,193<sup>32</sup> new patent examiners and plans to hire an additional 1,200 examiners this year and each year for the next five years.<sup>33</sup> Lack of information is a more significant problem and will be far more difficult to solve.

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<sup>27</sup> See Beth Simone Noveck, *Peer-to-Patent: Collective Intelligence, Open Review, and Patent Reform*, 20 HARV. J.L. & TECH. 123, 124–25 (2006) (citing U.S. Government Accountability Office, GAO-05-720, *Intellectual Property: PTO has Made Progress in Hiring Examiners, but Challenges to Retention Remain* 28 (2005)).

<sup>28</sup> See U.S. PATENT AND TRADEMARK OFFICE, U.S. PATENT ACTIVITY CALENDAR YEARS 1790 TO PRESENT, *supra* note 8.

<sup>29</sup> See U.S. PATENT AND TRADEMARK OFFICE, STRATEGIC PLAN 2007–2012 (2007), available at <http://www.PTO.gov/web/offices/com/strat2007/stratplan2007-2012.pdf>.

<sup>30</sup> See European Patent Office, *Patents Around the World*, <http://www.epo.org/focus/patent-system/patents-around-the-world.html> (last visited Mar. 27, 2008).

<sup>31</sup> *Id.*

<sup>32</sup> See U.S. PATENT AND TRADEMARK OFFICE, STRATEGIC PLAN 2007–2012, *supra* note 29, at 6.

<sup>33</sup> See Timothy Prickett Morgan, *PTO Elaborates on 2006's Issued Patents and Backlog*, IT JUNGLE, Jan. 22, 2007, <http://www.itjungle.com/tfh/tfh012207-story06.html>; see also U.S. PATENT AND TRADEMARK OFFICE, STRATEGIC PLAN 2007–2012, *supra* note 29, at 11. “Between 2005 and 2012, we will have hired over 9,000 new examiners.”



In 2004, the National Academy of Sciences published *A Patent System for the 21st Century*. The report noted “there is no substitute for having adequate numbers of trained personnel with sufficient time to exercise their considered judgment.”<sup>34</sup> But ensuring patent examiners receive correct information is a critical component of the examiner’s ability to exercise that judgment. Ideally, when a patent application is filed, an examiner compares the claimed invention against everything that has come before it: what is called “prior art.” The prior art is then used to decide whether an invention is novel and non-obvious (among other things) and, therefore, worthy of a patent. The initial burden of showing that a claimed invention is obvious, and thus not patentable, is statutorily placed upon the examiner.<sup>35</sup> To balance that burden, the United States Code of Federal Regulations places on applicants “a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the [PTO] all information known to that individual to be material to patentability.”<sup>36</sup>

However, this does not impose a duty upon applicants to actively uncover prior art. Rather, they must merely share the prior art with which they are familiar. Even acting in good faith and with the best of intentions, a patent applicant cannot disclose prior art of which he or she is unaware. Thus, any disclosures should not be treated as exhaustive. Yet, due to the aforementioned time constraints, they often are. This point is demonstrated by the facts in *KSR*, where Teleflex asserted that it was the exclusive licensee to a patent held by Engelgau and that *KSR*’s use of similar pedal technology infringed its rights under the license. The Court, however, invalidated the Engelgau patent by relying upon a prior art reference that was not disclosed by Engelgau when he obtained the patent.<sup>37</sup>

The resources available to the patent examiner are finite, partially due to security precautions. The examiners options are limited to internal sources available at the PTO, such as the three PTO computer systems (EAST, WEST, and FPAS), and other proprietary database

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<sup>34</sup> See MERRILL ET AL., *supra* note 1, at 104.

<sup>35</sup> See 17 U.S.C. § 102 (2006).

<sup>36</sup> See 37 C.F.R. § 1.56(a) (2006).

<sup>37</sup> See *KSR Int’l*, 127 S. Ct. at 1738. “Had Engelgau included Asano in his patent application, [the District Court] reasoned, the PTO would have found claim 4 to be an obvious combination of Asano and Smith.”

libraries.<sup>38</sup> This reliance on such a limited pool of knowledge presupposes a well-documented history of innovation and has the practical effect of placing the examiner at a disadvantage when searching for relevant prior art. In many cases the pile of hay is too large to find a needle, while in other cases, the hay is not even in a pile. Sometimes, the needle is in another pile of hay altogether, located in a different barn to which the examiner does not have access.

The dependence upon the closed system further anticipates that the body of patentable subject matter remains static. Constant advances in science necessarily pose the question of what constitutes patentable subject matter to Congress and the courts. The expansion of patentable subject matter exacerbates the difficulties inherent in maintaining a closed research system, as the PTO systems are not immediately equipped to cope with finding prior art when patentable subject matter expands. For example, when business methods became patentable, the PTO did not have business method prior art in its systems.

#### IV. THE EFFECTS OF THE PATENT REFORM ACT AND THE *KSR* DECISION

To complicate matters further, the *KSR* decision has the potential to increase the workload placed upon patent examiners. Conceptually, prior art expansively includes everything known to man up to the point of any given invention.<sup>39</sup> Quite obviously, however, not all prior art will actually be relevant. The purpose of the CAFC's TSM test (the *Graham* test supported by the Supreme Court, and myriad other analyses developed by courts over the years) is essentially to determine what prior art is relevant and how it should be considered.<sup>40</sup> While the PTO is not controlled by any particular court decision, the tests used by courts no doubt give the PTO guidance as to how they should be examining patent applications. In fact, the PTO has already sent the Office of Management and Budget a

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<sup>38</sup> See Noveck, *supra* note 27, at 135.

<sup>39</sup> "Prior art (also known as or state of the art, which also has other meanings), in most systems of patent law, constitutes all information that has been made available to the public in any form before a given date that might be relevant to a patent claims of originality. If an invention has been described in prior art, a patent on that invention is not valid." See Wikipedia, Prior Art, [http://en.wikipedia.org/wiki/Prior\\_art](http://en.wikipedia.org/wiki/Prior_art) (last visited Mar. 27, 2008).

<sup>40</sup> See *Graham*, 383 U.S. at 17.

draft of training guidelines for use by patent examiners in light of the decision handed down in *KSR*.<sup>41</sup>

The standard for determining non-obviousness is a “person having ordinary skill in the art” (“PHOSITA”).<sup>42</sup> That is to say that if the new invention departs from the prior art in a manner that would seem obvious to a person having ordinary skill in the area, then the invention is not patentable.<sup>43</sup> This is the essence of the *Graham* test advocated by the Supreme Court.<sup>44</sup> By contrast, the TSM test further required some motivation or suggestion within the prior art that obviated the departure.

The *Graham* test makes no such requirement, allowing instead that courts may utilize secondary considerations such as “commercial success, long felt but unsolved needs, failure of others . . . to give light to the circumstances surrounding the origin of the subject matter sought to be patented.”<sup>45</sup> Although this is easier to determine when comparing inventions to a single instance of prior art, this standard also applies to the more likely scenario: combinations of prior art, as seen in *KSR*. The *Graham* test sets forth a broad, flexible inquiry for the courts, but, to state the obvious, an examiner cannot make the correct decision regarding the obviousness of departure from prior art if she does not have all relevant prior art in front of her.

As if determining the extent to which a claimed invention is novel or non-obvious in relation to earlier works was not already difficult enough, the Supreme Court has added another dimension to the analysis. In the eyes of the Supreme Court, the CAFC’s PHOSITA “attempting to solve a problem would likely be led only to those elements of prior art designed to solve the same problem.”<sup>46</sup> However, under the Supreme Court’s analysis in *KSR*, “a person of ordinary skill is also a person of ordinary creativity, not an

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<sup>41</sup> See U.S. Patent and Trademark Office, Draft *KSR* Training Guidelines Under OMB Review, <http://www.PTO.gov/web/patents/notices/ksrguidance.htm> (last visited Mar. 27, 2008).

<sup>42</sup> See 35 U.S.C. § 103(a) (2006).

<sup>43</sup> See *KSR Int’l*, 127 S. Ct. at 1742. “The question is not whether the combination was obvious to the patentee but whether the combination was obvious to a person with ordinary skill in the art.”

<sup>44</sup> See *Graham*, 383 U.S. at 17.

<sup>45</sup> *Id.*

<sup>46</sup> *KSR Int’l*, 127 S. Ct. at 1742.

automaton.”<sup>47</sup> A logical reading of this dicta appears to widen the scope of relevant prior art to include items that one might not normally associate with the field of the claimed invention. Relating back to the increased pressures on patent examiners, with this new expansion of the pool of relevant prior art, the examiner’s workload is also increased. The examiner must now search for and analyze more prior art, which further compounds the problems presented by utilizing a closed search system.

Additionally, the PRA proposes changing patents from a first-to-invent to first-to-file system. In doing so, the PRA would amend sections of the U.S. patent law<sup>48</sup> to treat foreign and domestic prior art equally.<sup>49</sup> Currently, only foreign inventions that are patented or described in a printed publication are pertinent to a patent applicant’s right to a patent in the United States; prior art that is not patented but on-sale or in public use is only potentially relevant if found in the United States.<sup>50</sup> The PRA would make public use or on-sale activity in a foreign country relevant to the examiner’s decision as well, further enlarging the breadth of prior art that may have bearing on the ultimate outcome of a claimed invention’s patentability. Even the most meticulous prior art search, using a system that is not closed, is unlikely to turn up every apposite instance of prior art.

To be clear, expanding the pool of potentially relevant prior art is not a bad thing. In fact, it is sensible to compare claimed inventions against as much prior art as possible. But increasing the breadth of prior art, *ceteris paribus*, diminishes the ability of an examiner to “get it right” because it broadens the limits of what counts as prior art. Examiners can only digest and appreciate so much prior art in their allotted time, regardless of how much prior art they *should* be considering. Adding examiners will help, but those examiners need to have access to the right information or else any attempt at a solution becomes an exercise in futility. The PTO wants to reduce patent pendency time while increasing the quality of patents issued. This is a feat that can only be accomplished by addressing the information deficit.

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<sup>47</sup> *Id.*

<sup>48</sup> The PRA proposes amending 35 U.S.C. § 102 and repealing 35 U.S.C. § 104.

<sup>49</sup> See Posting of Crouch, *supra* note 14; Patent Reform Act of 2007, S. 1145, 110th Cong. (2007); see Patent Reform Act of 2007, H.R. 1908, 110th Cong. (2007).

<sup>50</sup> See 35 U.S.C. § 102(b) (2006).

## V. PEER-TO-PATENT

Peer-to-Patent derives from the well-known practice of peer review. Experiments with online collaboration over the last few years has shown a willingness on the part of the public to offer the wealth of their personal knowledge to a worthy cause.<sup>51</sup> Patent examination is well-suited to pre-grant community participation because it depends on scientific expertise to make the correct determination. Under the current patent laws, the public is allowed to submit prior art, but only for a very limited period of time<sup>52</sup> and with no annotations. Peer-to-Patent expands on this to allow the public to address the information deficit directly by bridging the gap between the community and the examiner.

The Peer-to-Patent pilot invites public participation into the patent examination process. Published patent applications are posted to the Peer-to-Patent website where they can be reviewed by any member of the public that has an interest in the subject matter.<sup>53</sup> Scheduled to run for one year (beginning June 15, 2007), it offers the first opportunity in the history of the PTO to contribute prior art, commentary, and suggested avenues for research, directly to the Office, as well as the occasion to receive feedback from the patent examiner about the relevance of those submissions to the patent examination process. Although the patent examiner still controls the ultimate decision of patentability, this is the first time the general public has had an opportunity to share information that, if relevant, can be used to narrow or even defeat the claims of a patent application. In essence, Peer-to-Patent allows the examiner to search the “human database” of people in the community who are knowledgeable about a particular area of innovation.

The pilot is limited in scope to patent applications that are classified in PTO Technology Center 2100 (“TC2100”), which covers

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<sup>51</sup> See Noveck, *supra* note 27, at 144.

<sup>52</sup> See 37 C.F.R. § 1.99 (2006) (“Third-party submission in published application”).

<sup>53</sup> One concern with opening the patent process to public participation is the confidentiality regarding technologies being submitted. Peer-to-Patent only posts patent applications that have been published. It does not disclose any information beyond what can already be found in other patent search engines or even by searching the PTO website. See Noveck, *supra* note 27, at 155.

computer architecture, software, and information security patents.<sup>54</sup> While TC2100 is only one of eight technology centers housed at the PTO,<sup>55</sup> it presents a perfect sample of applications to test the ability of peer review to deliver useful information. The innovation in the computer software industry is cutting-edge and much of the know-how is not contained in easy-to-find academic journals, making it the area of patentability that suffers most from the information deficit.

The sluggish pace of reform in this particular field can partially be attributed to the fact that the area of software patents is also among the more contentious. Many groups support eliminating software patents altogether,<sup>56</sup> but there is no indication that the PTO intends to discontinue granting them.<sup>57</sup> Even at the European Patent Office, which is far more skeptical than its American counterpart when it comes to recognizing computer software as patentable subject matter, software patents are sometimes issued.<sup>58</sup> Thus, it becomes increasingly important that those patents that are granted reflect actual innovation occurring in the industry.

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<sup>54</sup> See U.S. Patent and Trademark Office, 2100: Computer Architecture, Software, & Information Security, <http://www.uspto.gov/web/info/2100.htm> (last visited Mar. 27, 2008).

<sup>55</sup> See U.S. Patent and Trademark Office, Patent Technology Centers, <http://www.uspto.gov/web/info/pat-tech.htm> (last visited Mar. 27, 2008).

<sup>56</sup> See Brief for The Software Freedom Law Center as Amicus Curiae Supporting Petitioner, *Microsoft Corp. v. AT&T Corp.*, 127 S. Ct. 1746 (2007) (No. 05-1056).

<sup>57</sup> To be exact, even if the PTO agreed with the opposition, it is up to Congress and the Courts to decide the scope of patentable subject matter.

<sup>58</sup> While Article 52(2)(c) of the European Patent Convention states that computer programs are explicitly ineligible for patents, the Board of Appeals of the European Patent Office has determined that when incorporated into a machine or a process that is itself patentable, the resulting system or process of operating a computer can be protected by patent. See European Patent Convention, art. 52, Dec. 13, 1970, E.P.C. 1973; see also IPR HELPDASK, CIP PROGRAMME, DG ENTER. AND INDUS. OF THE EUROPEAN COMM'N, PATENTABILITY OF COMPUTER PROGRAMS (2005), [http://www.ipr-helpdesk.org/documentos/docsPublicacion/html\\_xml/8\\_patentabilityComputerPrograms%5B0000001159\\_00%5D.html](http://www.ipr-helpdesk.org/documentos/docsPublicacion/html_xml/8_patentabilityComputerPrograms%5B0000001159_00%5D.html). For the Board of Appeals of the European Patent Office decision, see Case T-0928/03-3.5.01, *Konami Co., Ltd.*, E.P.O. (June 2, 2006), available at <http://legal.european-patent-office.org/dg3/pdf/to30928eu1.pdf>.

The rise of open source<sup>59</sup> has made software prior art more widely available to the public, but it is difficult for the PTO to keep up. To that end, the Office has agreed to pursue the Open Source as Prior Art Initiative (“OSAPA”), aimed at increasing examiner accessibility to electronically published source code.<sup>60</sup> However, until that initiative is fully realized, a significant amount of open source prior art remains unavailable via the normal searching methods employed by patent examiners.

Furthermore, the speed at which the software industry moves, coupled with the average time it takes to get a patent, has made procuring a patent moot in many cases, which has no doubt left many inventions undocumented and, therefore, unavailable within the PTO search systems. Without access to the relevant pool of knowledge, and with disclosure by patent applicants unreliable, patent examiners cannot correctly determine whether or not they should grant a patent. The examiner is unlikely to know about the open or closed source code, products or processes, websites, or prior publications that ordinary people in the community know about from their personal experience.

Peer-to-Patent also demonstrates the importance of public accountability. If public review is institutionalized, it can help to ensure both that inventors stop filing poorly drafted, egregiously unmeritorious applications and that examiners stop granting patents to them.<sup>61</sup> Public scrutiny at an early stage in the patent lifecycle forces inventors to fully consider the consequences, such as the impact upon their reputations, of filing an unmeritorious patent application.

Peer-to-Patent can also open up a conversation between the examiners and the public about the validity of software patents. Debate as to whether software is patentable subject matter abounds, but there is very little in the way of providing a venue for funneling those ideas towards the people that are in a position to make changes. One of the most important distinctions between Peer-to-Patent and other sites that allow users to comment on patents is that Peer-to-

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<sup>59</sup> See IBM developerWorks, New to Open Source, <http://www-128.ibm.com/developerworks/opensource/newto/#1> (“[Open source is] public collaboration on a software project.”) (last visited Mar. 27, 2008).

<sup>60</sup> See The Linux Foundation, OSAPA, <http://www.linux-foundation.org/en/Osapa> (last visited Mar. 27, 2008).

<sup>61</sup> See Brian Handwerk, *Antigravity Machine Patent Draws Physicists’ Ire*, NAT’L GEOGRAPHIC NEWS, Nov. 11, 2005, [http://news.nationalgeographic.com/news/2005/11/1111\\_051111\\_junk\\_patent.html](http://news.nationalgeographic.com/news/2005/11/1111_051111_junk_patent.html).

Patent is run in cooperation with the PTO. Examiners will actually receive user-submitted prior art. Providing relevant prior art to the PTO that invalidates pending software patent applications is perhaps the best argument that opponents to software patenting can make.<sup>62</sup> Successfully invalidating pending software patent applications will go a long way toward beginning a conversation that is not easily avoided.

Nevertheless, opening the process to public accountability will depend upon the community's willingness to participate in the pilot and demonstrate, to both the PTO and to Congress, that the community—not just lawyers or patent professionals, but technologists, students, hobbyists, engineers, and others—has knowledge to contribute that can improve the process.

It is important to remember that patent examiners are dedicated to the integrity of patents and are not charged with the task of granting patents purely for the sake of granting patents. The examiner is empowered under the law to reject claims that are not novel or are obvious in light of prior publications. The system is designed to enable the public to be highly specific about the relevance of the prior art to the claims of the application. If any member of the community is able to show the Patent Office why, by law, the claims of an application should not issue, the PTO is almost certain to welcome and use that input to strike the claims.

## VI. THE COMMUNITY

Since its launch on June 15, 2007 (and as of this writing in March, 2008), the Peer-to-Patent community has grown to nearly 2,000 peer reviewers.<sup>63</sup> The value of creating open dialogue in patent law can be seen in the diversity of the community. Upon signing up, reviewers are asked to indicate their profession. Possibly the most interesting piece of data is that, although the Peer-to-Patent pilot is limited to applications concerning computer technologies, less than half (39%) of the peer reviewers classified themselves as a "Computer Professional/Technologist."<sup>64</sup> This seems to support the idea that

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<sup>62</sup> Technically, one does not invalidate a patent application because it is still just an application and not a granted patent. Rather, a person who submits relevant prior art renders the claimed invention obvious and prevents a patent from issuing or forces the applicant to narrow the claims.

<sup>63</sup> See Peer-to-Patent, Community Patent Review, [www.peertopatent.org](http://www.peertopatent.org) (last visited Mar. 27, 2008).

<sup>64</sup> See The Peer-to-Patent Project, Site Statistics as of January 28, 2008, <http://dotank.nyls.edu/communitypatent/reviewerdemographics.html>.



members of the community, regardless of their actual area of practice, are knowledgeable and, perhaps most importantly, willing to contribute.

This conclusion is further corroborated by the diversity of educational degrees among reviewers. While the majority hold engineering or computer science degrees, reviewers report having degrees in everything from comparative literature to applied mathematics, from the Bachelors level through Doctorates.<sup>65</sup> This is significant considering that patent examiners are not required to possess an advanced degree.<sup>66</sup> Having reviewers who hold advanced degrees assist in the examination process will itself be a noteworthy improvement to the existing system.

To date, the Peer-to-Patent site has received over 236,000 page-views from 41,361 unique visitors in 133 countries, highlighting the transnational benefit that can be derived from peer review. Given the proposed PRA amendments to remove any dichotomy between prior art found domestically and abroad, it is obvious that foreign knowledge and expertise will become more valuable to the PTO's decision-making. Conversely, in an increasingly global society, people in any country can be harmed by patents granted as a result of an information deficit and, thus, have an incentive to defeat non-meritorious patents that might erroneously confer or allocate market power,<sup>67</sup> resulting in a host of unwanted consequences. During the time a non-meritorious patent is issued and is either invalidated by the courts or expires, the public may be forced to design around the patent claims, pay royalties, or otherwise comply with the patent in order to avoid the threat of litigation, all of which could potentially contribute to a lack of access to natural advancements in current technologies and future downstream scientific and technological breakthroughs.

There are no restrictions on who may register with Peer-to-Patent to become a peer reviewer. This has raised some concern that biased parties from within the industry will attempt to game the system. While there are other mechanisms in place to mitigate the possibility of abuse,<sup>68</sup> it is important to note that the ultimate determination of

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<sup>65</sup> *Id.*

<sup>66</sup> See Noveck, *supra* note 27, at 132.

<sup>67</sup> See MERRILL ET AL., *supra* note 1, at 95.

<sup>68</sup> See Noveck, *supra* note 27.

patentability still lies with the patent examiner. Peer-to-Patent forwards the "Top Ten"<sup>69</sup> user-submitted prior art references, with any annotations the community appends, but it is up to the examiner to decide how to use that information in reaching her decision. Furthermore, if the information is relevant to the patentability of a claimed invention then it should matter not whether the information was submitted out of bias.

## VII. EARLY RESULTS

The average age from filing to first action for an application in TC2100 is 31.2 months.<sup>70</sup> In order to more quickly gather the data necessary to make any determination as to permanently implementing Peer-to-Patent, applications submitted through the pilot are examined immediately after the review period.<sup>71</sup> To date, the PTO has examined ten applications submitted through Peer-to-Patent. The age from filing to first action for these applications was between twenty-four and twenty-six months.

The ten office actions, including one final rejection and nine non-final rejections, all cited reviewer-submitted prior art as having been considered by the examiner. In two cases, the patent examiner rejected the patent application in light of prior art submitted by Peer-to-Patent reviewers. With regard to both rejections, the examiner specifically referred to sections within the prior art that the submitting reviewer noted in his annotations as being particularly relevant.

One of the office actions rejecting claims in view of reviewer-submitted prior art was in response to an application assigned to Hewlett-Packard (HP).<sup>72</sup> All twenty-one of the application's claims

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<sup>69</sup> Prior art submissions are voted on by other members in the community (who can also comment on the relevance and usefulness of the submission). Only the Top Ten prior art references (and their reviewer-submitted annotations) are forwarded to the PTO for use by the examiners.

<sup>70</sup> See John Love, Deputy Commissioner for Patent Examination Policy, U.S. Patent and Trademark Office, Address at the AIPLA Spring Meeting: Patent-Relations with the PTO-Committee Meeting (May 10, 2007), [http://www.aipla.org/Content/Microsites139/Patent-Relations\\_with\\_the\\_PTO/Committee\\_Documents41/Reports41/John\\_Love\\_on\\_PTO\\_Strategic\\_Planning\\_and\\_more\\_at\\_2007\\_Spring\\_Meeting\\_\\_Boston\\_\\_MA/050807-JLove.pdf](http://www.aipla.org/Content/Microsites139/Patent-Relations_with_the_PTO/Committee_Documents41/Reports41/John_Love_on_PTO_Strategic_Planning_and_more_at_2007_Spring_Meeting__Boston__MA/050807-JLove.pdf).

<sup>71</sup> Patent applications are posted on Peer-to-Patent within thirty days after they have published. They are available for public review for approximately seventeen weeks from their posting date.

<sup>72</sup> See U.S. Patent Application No. 11/286,554 (filed May 24, 2007).

were rejected under 35 U.S.C. § 103(a)<sup>73</sup> as being obvious. In reaching the decision, the examiner relied on a patent application filed five months prior to the HP application as well as non-patent literature supplied by a Peer-to-Patent reviewer. The examiner determined that each claim of the application was obvious when compared to the previous application, the non-patent literature, or the two prior art references in combination.

A second office action specifically cited a reviewer-submitted prior art reference as the basis for rejecting claims in a patent application assigned to IBM.<sup>74</sup> The examiner rejected two claims under 35 U.S.C. § 102(b)<sup>75</sup> as having been anticipated by a reviewer-submitted prior art reference (published in 1999) and, thus, failing the test for novelty.

Though it is too early in the program to contend that these encouraging results prove the utility of extending peer review to the patenting process, these cases appear to support the notion that Peer-to-Patent participants are qualified to provide relevant information to the system.

Observers have expressed motive as a prominent concern in allowing the public to participate in the examination of patent applications. While Peer-to-Patent emphasizes the idea that relevant prior art is relevant regardless of impetus, if future participation follows the trend set out by these early cases, it may serve to allay the fear that prior art submitted maliciously is detrimental to the institution of patents. The prior art reference cited in rejecting the HP application is an Intel product reference guide<sup>76</sup> submitted to Peer-to-Patent by an IBM software engineer. Notwithstanding the potential benefit to IBM in defeating the claims of the HP application, it might

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<sup>73</sup> See 35 U.S.C. § 103(a) (2006) ("A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.").

<sup>74</sup> See U.S. Patent Application No. 11/329,773 (filed July 12, 2007).

<sup>75</sup> See 35 U.S.C. § 102(b) (2006) ("A person shall be entitled to a patent unless . . . the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.").

<sup>76</sup> See INTEL CORP., INTEL ACTIVE MANAGEMENT TECHNOLOGY (INTEL AMT) QUICK REFERENCE (October 1, 2005), [http://download.intel.com/support/motherboards/desktop/sb/amt\\_quick\\_start\\_guide1.pdf](http://download.intel.com/support/motherboards/desktop/sb/amt_quick_start_guide1.pdf).

also be fair to suggest that in doing so, the reviewer aided in protecting the intellectual property of Intel.

Along these same lines, the prior art reference cited in rejecting the IBM application is a memo<sup>77</sup> published by the Internet Engineering Task Force ("IETF") and submitted to Peer-to-Patent by a Professor of Computer Science. The IETF works closely with international standards organizations and its publications are, at least in theory, intended to improve current practices in computing. The academic position of the reviewer by no means precludes malevolent motive, but even assuming *arguendo* that ill intent is present, it is important that those who are familiar with publications from organizations like the IETF help to ensure that those publications are placed before examiners.

The inferences drawn above do not verify that some altruistic trait exists among members of the community and, indeed, claiming so would be naïve. However, they are presented here because they offer credence to the hypothesis that a person who chooses to pursue a career in a particular field does so because she, at least to some extent, is passionate about her work and has an incentive to help maintain the integrity of her industry. Relying on this theory may ultimately prove to be misguided, but until a contradictory situation presents itself, it is not unreasonable to consider it a viable paradigm under which to proceed.

As of February 29, 2008, a total of thirty patent applications have undergone review on Peer-to-Patent. On average, each of the completed applications had a community of fourteen reviewers who submitted five instances of prior art. While Peer-to-Patent is allowed to submit up to ten prior art references to the PTO, there are many factors that influence (and to a degree dictate) the amount of prior art submitted. The relative size of a particular field, the extent to which certain subject matter permeates the mainstream, and the degree of difficulty involved in reading a particular application, all contribute to the number of prior art references that may be uncovered. Reaching some critical mass of submitted prior art references increases the likelihood that relevant prior art is forwarded to the PTO, but failing to do so should not be viewed as fatal to the project. In fact, the memo used in defeating the claims of the IBM application above was one of only three prior art references submitted by the application's community.

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<sup>77</sup> See RUSSELL HOUSLEY, CRYPTOGRAPHIC MESSAGE SYNTAX, INTERNET ENGINEERING TASK FORCE (June 1, 1999), <http://www.ietf.org/rfc/rfc2630.txt>.

Furthermore, the primary goal of Peer-to-Patent is to assist in filtering out undeserving patent applications before patents issue. Stated another way, Peer-to-Patent offers inventors the opportunity to show that their invention is truly unique. Thus, in some circumstances, that a posted patent application's community does not submit numerous prior art references should not be considered a failure on the part of the public to participate. It is entirely possible that a lack of prior art is an indication of a truly meritorious patent application and it is no doubt likely that consenting inventors are selecting their best, not their worst, applications to volunteer for public scrutiny in the pilot.

Going forward, the project's leadership recognizes the necessity of educating participants on their role within the system. An obvious lesson here is that the program's continued success relies heavily upon bolstering our pedagogic endeavors to ensure that the prior art that is submitted, regardless of the quantity, is relevant and useful.

### VIII. WHY PEER-TO-PATENT?

Many other countries are also experimenting with patent reform. For example, in 2001, Australia introduced the "innovation patent," which replaced the former "petty patent." The objective of the innovation patent is to address the gap in patent protection for minor and incremental innovations. They are intended to be less expensive and quicker to receive than the standard patent.<sup>78</sup> The period of protection for an innovation patent is eight years, as opposed to the twenty-year protection period granted under the standard patent.

Japan, recognizing the international importance of patents, has advanced an ambitious project called the Patent Prosecution Highway ("PPH"). The idea behind the PPH is to streamline the process for patent applicants to acquire foreign patents. Thus far, the JPO has launched PPH pilots with the PTO, the United Kingdom IP Office, and the Korean IP Office. The program purports to reduce the workload of examiners by encouraging participating patent offices to utilize each other's prior art searches and examination results.<sup>79</sup>

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<sup>78</sup> See Andrew F. Christie & Sarah L. Moritz, *Australia's Second-Tier Patent System: A Preliminary Review*, 16 IPRIA REP. NO. 02/04 (2005), available at [http://www.ipria.org/publications/AU\\_2nd-tier\\_Report-revised.pdf](http://www.ipria.org/publications/AU_2nd-tier_Report-revised.pdf).

<sup>79</sup> See Japan Patent Office, Patent Prosecution Highway (PPH), [http://www.jpo.go.jp/torikumi\\_e/index.htm](http://www.jpo.go.jp/torikumi_e/index.htm) (last visited Mar. 27, 2008) (click on the link titled "Patent Prosecution Highway (PPH)" to access the cited information).

Domestically, there has been support for a system of post-grant review.<sup>80</sup> This would create a process whereby third parties could institute a challenge against the claims of a patent for a limited period of time after it has been granted. A successful challenge would cancel the invalid claims of the challenged patent.

There is merit to these programs, but the problem is that none of these solutions address how to avoid granting low quality patents in the first place. The Australian innovation patent sheds twelve years of protection, but the tradeoff appears to be a lower standard of patentability.<sup>81</sup> In order to obtain a standard patent in Australia, an invention must be shown to take an "inventive step," as opposed to the less stringent "innovative step" necessary for an innovation patent.<sup>82</sup> Lowering the threshold for patentability is not likely to be the solution for granting higher quality patents, regardless of the term of protection. Indeed, this merely expands the same problems associated with an information deficit to a new set of circumstances. The only difference is that instead of protecting a non-meritorious patent for twenty years, it would only be protected for eight. Moreover, the number of innovation patent applications filed is nearly the same as those filed for standard patents.<sup>83</sup> Because examiners compare both types of patents against the same pool of prior art,<sup>84</sup> deficiencies in information could potentially lead to a doubling of non-meritorious patents.

Japan's PPH program promotes shared resources to expedite the examination process, something it has in common with Peer-to-Patent. The difference lies in timing. An application is not eligible for the PPH until it has already been deemed patentable by the office of

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<sup>80</sup> See MERRILL ET AL., *supra* note 1, at 96; Patent Reform Act of 2007, H.R. 1908, 110th Cong. (2007).

<sup>81</sup> See Hollaar, *supra* note 1, at 4.

<sup>82</sup> See Christie & Moritz, *supra* note 78; Patents Act, 1990, 18(1A)(b)(ii) (Austl.); see Patents Act, 1990, 7(4) (Austl.) ("[A]n invention is to be taken to involve an innovative step when compared with the prior art base unless the invention would, to a person skilled in the relevant art, in the light of the common general knowledge as it existed in the patent area before the priority date of the relevant claim.").

<sup>83</sup> See Christie & Moritz, *supra* note 78, at 25.

<sup>84</sup> See *id.* at 17 ("The prior art base applicable to standard patents is also applicable to innovation patents.").

first filing.<sup>85</sup> This in itself presents difficulties when comparing the differences in patent ideologies between countries (for example the differences between the PTO and the EPO with regard to patenting software as discussed above).

Beyond that, if the consideration of patentability is made without using the best information, then there is a serious possibility that all that has been done is make low quality patents easier to obtain on an international level. Furthermore, while the PPH does combine the resources of multiple patent offices<sup>86</sup> to some improvement, the benefit is limited by the fact that all of the research systems are, to a degree, closed systems, whereas Peer-to-Patent actively seeks information that may not reside within the patent office systems.

Post-grant review would certainly provide a strong line of defense against overly broad or non-meritorious patents that slip through the cracks, containing them before the full extent of their complications can be realized. However, it does not obviate the need for providing patent examiners with useful, relevant information from the start so that they can make the correct decision of patentability. While having a patent invalidated through the post-grant review process would be far less costly to all parties than litigation, the element of uncertainty remains. It is essential that examiners have access to the best information so that non-meritorious patent applications are confronted as early in the patenting process as possible and inventors can be certain of their rights. Post-grant review should be instituted, but it should not be viewed as a panacea for undeserving patents.

## IX. CONCLUSION

This account is not meant to diminish the necessity of judicial and legislative responsibility in this field. In an article reviewing Peer-to-Patent for IP Law360, Mark L. Hogge rightly asserts that the majority of the patent lifecycle occurs after examination and that “[p]erhaps more focus by inventors and courts on the presentation and treatment

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<sup>85</sup> See Japan Patent Office, *supra* note 79 (“The PPH enables an application whose claims are determined to be patentable in the Office of First Filing (OFF) to undergo an accelerated examination in the Office of Second Filing (OSF) with a simple procedure according to a request from an applicant.”).

<sup>86</sup> It should be mentioned that the PPH programs are separate pilots, each between the JPO and one of the other patent offices, and not between all four offices combined. This means that the sharing of resources on an application is only between the JPO and whichever patent office is the second party to the pilot.

of inventions would be helpful in preventing invalid patents.”<sup>87</sup> But he appears to underestimate the reliance placed upon the patent examiner’s findings by inventors and courts alike and the consequences thereof.<sup>88</sup> If continued deference to examiners’ findings is to have any value, examiners must be provided with an encyclopedic pool of knowledge.<sup>89</sup>

Hogge further contends that there are better ways of stopping invalid patents, citing the creation of the Court of Appeals for the Federal Circuit as one.<sup>90</sup> But he fails to recognize that changing the venue for review does little, if anything, to eliminate “invalid” patents. If anything, this argument seems to cut against Hogge’s contention. Passing jurisdiction from a circuit court that traditionally invalidates patents to a court that is more likely to uphold patents makes it easier for a non-meritorious patent to live out its entire twenty-year lifecycle despite a lack of legal merit.

Whatever the duty of the inventor or the courts to “do their jobs,”<sup>91</sup> the importance of addressing the information deficit is highlighted by events like the *KSR* decision and the PRA. This is why Peer-to-Patent is crucial. It is the first chance to get relevant information to the PTO *before* the patent issues and not after it has become the subject of expensive and protracted litigation.

Though an erroneously granted non-meritorious patent confers the same monopoly rights upon the patentee as a properly granted one, it also represents a potentially large liability. A patentee will likely devote significant time and resources in bringing their invention

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<sup>87</sup> See Mark L. Hogge, *Uncle Sam Wants You . . . To Examine Patent Claims*, IP LAW360, May 29, 2007, <http://ip.law360.com/Members/ViewArticlePortion.aspx?Id=25702&ReturnUrl=..%2fsecure%2fViewArticle.aspx%3fId%3d25702>.

<sup>88</sup> *Id.* “Let us not kid ourselves about the curative effect of the p2p project. The notion that this project or anything like it will decrease the issuance of invalid patents is erroneous, and must be rejected. Such a notion is naive at best.”

<sup>89</sup> See *KSR Int’l*, 127 S. Ct. 1727. “We nevertheless think it appropriate to note that the rationale underlying the [presumption of validity given to issued patents]—that the PTO, in its expertise, has approved the claim—seems much diminished here.”

<sup>90</sup> See Hogge, *supra* note 87 (“One of the reasons for forming the Federal Circuit was to stop at least the Eighth Circuit’s trend of invalidating patents. In the course of 40 years, the Eighth Circuit is reputed to have upheld only one patent as valid. One way to stop invalid patents was to take jurisdiction over patents away from the circuits.”).

<sup>91</sup> *Id.*



to market, relying upon a twenty-year head start on the competition.<sup>92</sup> If a patentee is forced to assert his patent against an alleged infringer or defend it against a challenge within that period, what began as a stroke of luck could become a costly blow to the patentee. The cost of seeing a patent lawsuit through appeals can run into the millions and last for years,<sup>93</sup> with no guarantee of a favorable outcome to the patent owner. If the patent is indeed found to be non-meritorious, the court will invalidate the patent and the patent owner will not only lose much of the advantage that they had initially gained, but the time and money spent throughout the litigation process will have been a waste.

Furthermore, it is critical that issues of patentability are resolved from the start rather than waiting for a judge who knows little about patent law, and even less about science to make that determination. While the Court of Appeals for the Federal Circuit was specifically given jurisdiction over patent law, it is an appellate court and all cases related to patents must first be brought in one of the ninety-four federal district courts.

In an account by Northern District of Illinois Chief Judge James Holderman, district court judges are typically generalists by trade and thus not trained experts in patent law.<sup>94</sup> Rather, district judges must be able to tackle all types of federal cases that come before them. According to Federal Judicial Caseload Statistics published by the Administrative Office of the U.S. Courts, in the twelve-month period ending March 31, 2006, 244,068 cases were commenced in U.S. District Courts. Of those cases, less than 1% were patent lawsuits.<sup>95</sup> It is neither reasonable nor efficient to expect district judges to be experts in an area that constitutes such a small percentage of their overall workload.

The same problems extend to the Federal Circuit. Like district judges, judges sitting on the Federal Circuit are appointed by the President and confirmed by the Senate. The appointment is ordinarily

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<sup>92</sup> A patentee might also license or assign his patent to a party in a better position to bring the invention to market, but the same concerns apply in these situations as well.

<sup>93</sup> See James F. Holderman, *The Patent Litigation Predicament in the United States* (Mar. 26, 2007) (unpublished manuscript, on file with the U. OF ILL. J. L. TECH. & POL'Y) (citing AM. INTELLECTUAL PROP. LAW ASS'N, 2005 REPORT OF THE ECONOMIC SURVEY I-108-10 (2005), available at <http://www.jltp.uiuc.edu/works/Holderman.htm>).

<sup>94</sup> *Id.*

<sup>95</sup> See Judicial Business of the U.S. Courts, Federal Judicial Caseload Statistic, <http://www.uscourts.gov/caseload2006/contents.html> (last visited Mar. 27, 2008).

a reflection of a judge's general judicial prowess and not because of any expertise in patent law or science. Though the Federal Circuit is charged with the review of all appeals from district court decisions relating to patents, intellectual property cases only account for about one-third of the total cases brought before it.<sup>96</sup>

As unreasonable as it would be to expect federal district and federal circuit judges to be experts in patent law, it is even less reasonable to expect them to have a mastery of the scientific knowledge underlying every area of patentability that comes before them. In many cases then, judges are "provided [their] education on the pertinent technology by the respective advocates in the case before [them], who understandably emphasize the key points of the facts in their respective client's favor."<sup>97</sup>

Regardless of whether a non-meritorious patent is defeated or upheld in litigation, society suffers consequences. Defeated patents create "uncertainty about the validity of previously issued patents, [detering] investment in innovation and/or [distorting] its direction"<sup>98</sup> while erroneously upheld patents "encourage more charges of infringement and litigation,"<sup>99</sup> and "confer market power . . . without consumer benefit."<sup>100</sup> Confronting the processes that lead to undeserving patents as early in the patent process as possible will go a long way towards ensuring that society, through legislative and judicial mechanisms, does not have to undertake the burdensome task of weighing access against innovation. Peer-to-Patent represents a major step towards accomplishing that goal by addressing the information deficit and providing PTO examiners with the tools they need to make the best decisions.

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<sup>96</sup> See United States Court of Appeals for the Federal Circuit, About the Federal Circuit, <http://www.cafc.uscourts.gov/about.html> (last visited Mar. 27, 2008).

<sup>97</sup> See Holderman, *supra* note 93.

<sup>98</sup> See MERRILL ET AL., *supra* note 1, at 95.

<sup>99</sup> *Id.*

<sup>100</sup> *Id.*